FIGURE 1

TSA 1   TSA 2

C-Terminus
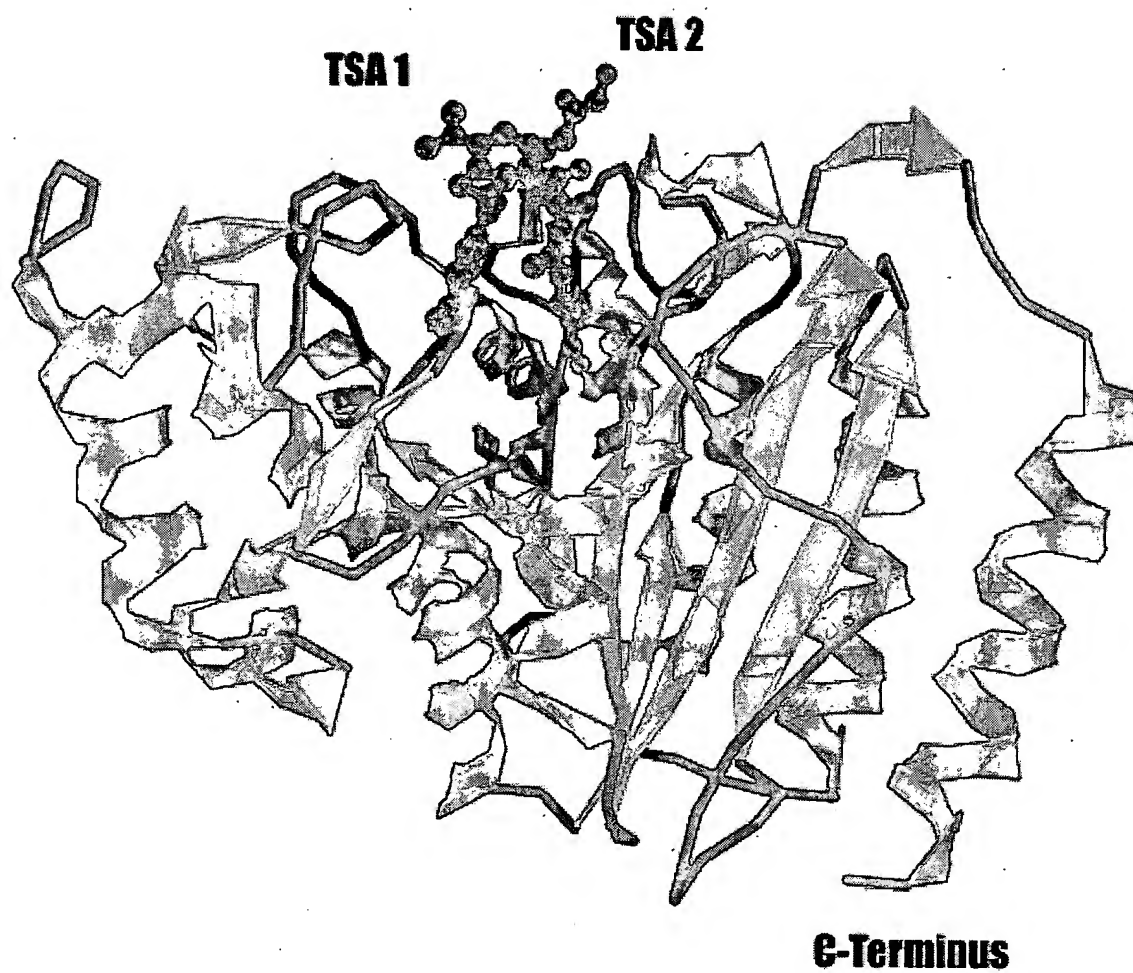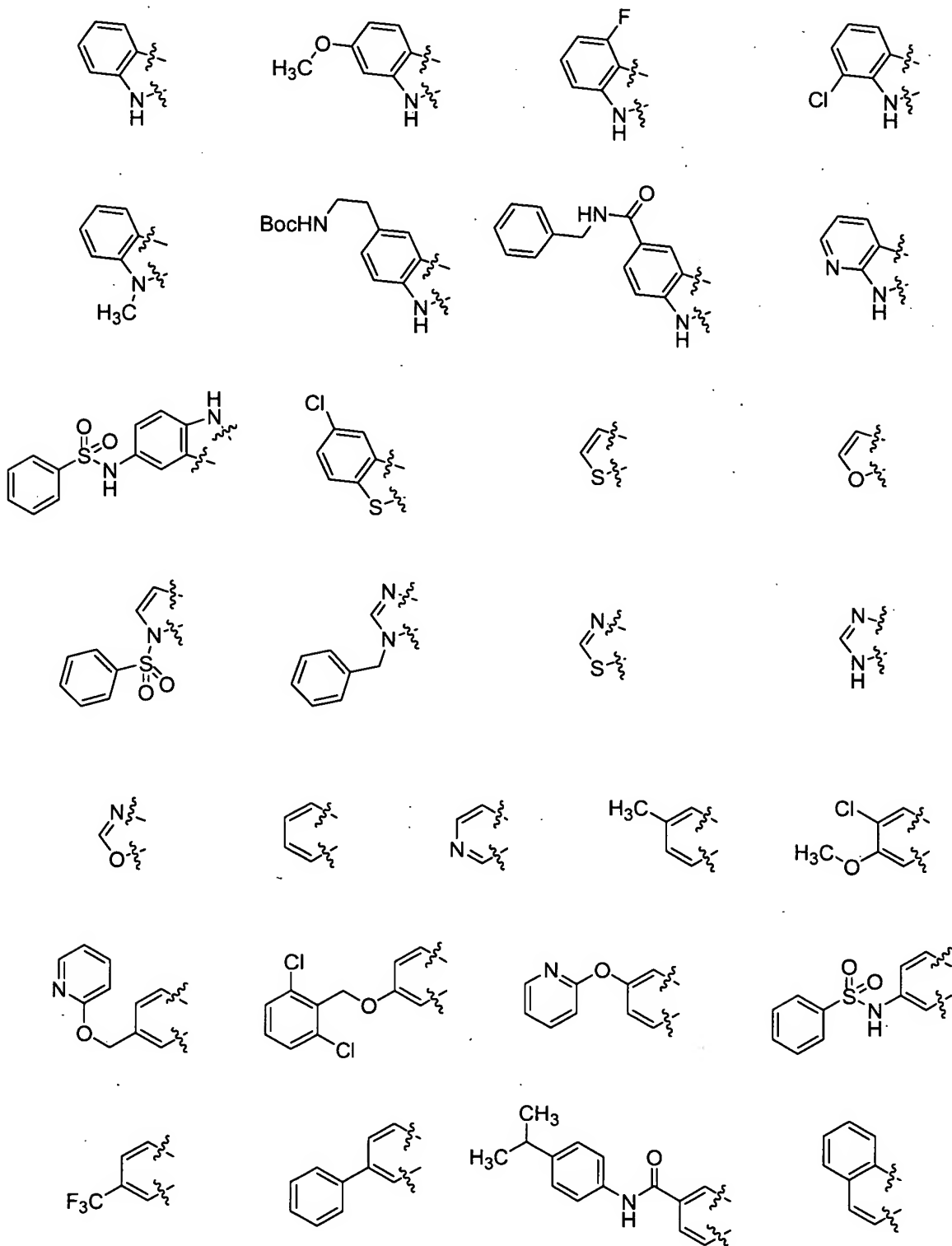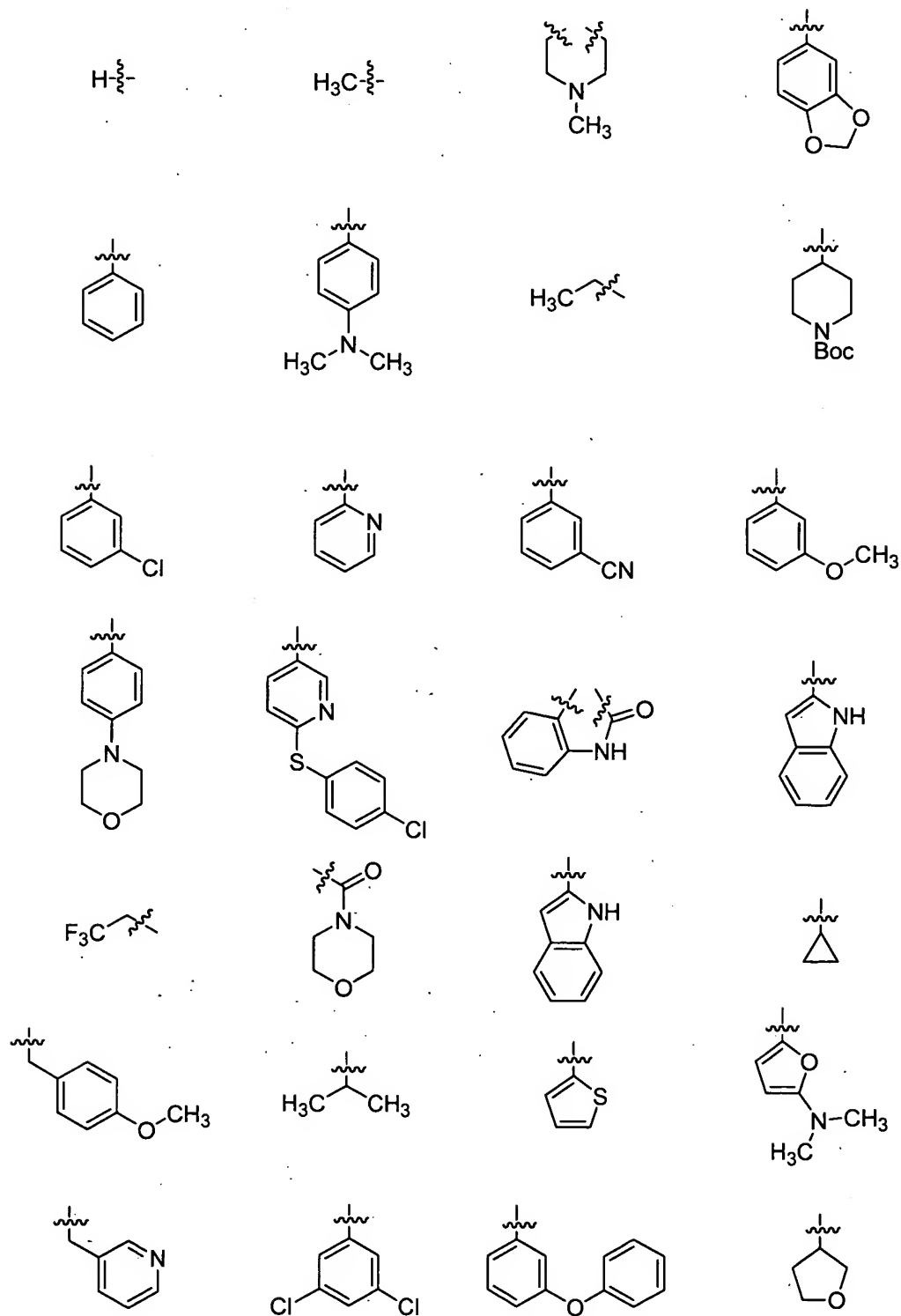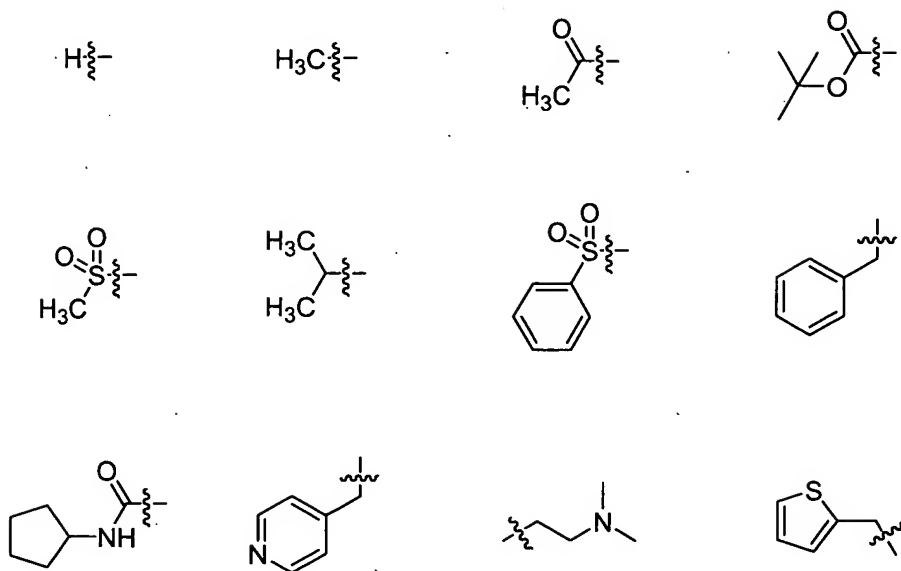
FIGURE 2A

Examples of R₁ and R₂ Substituents

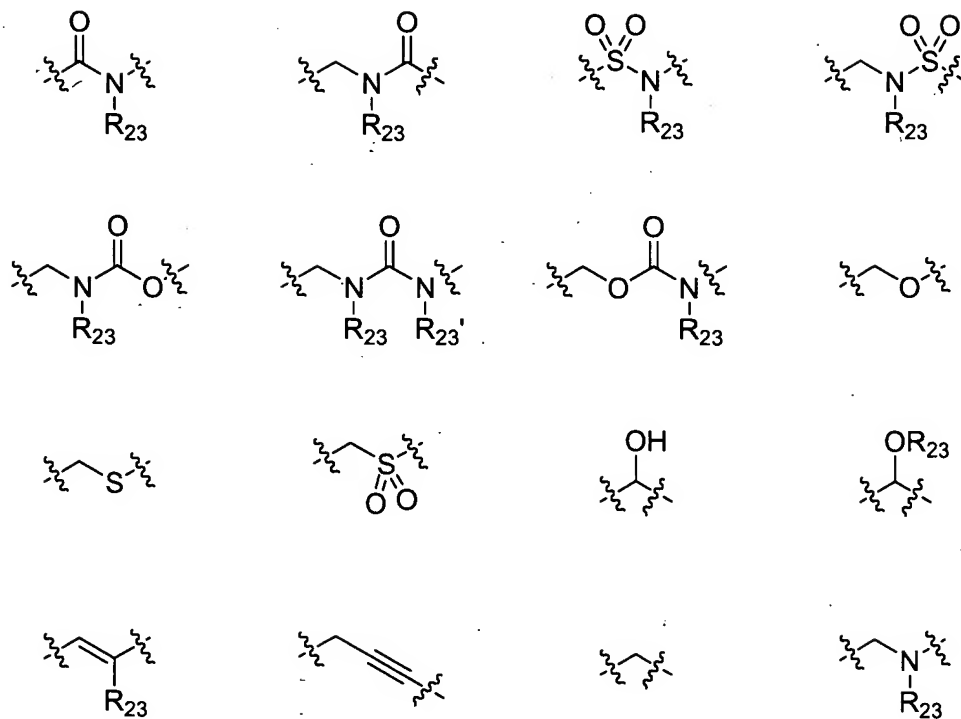# FIGURE 2A (cont.)

Examples of R₃ and R₄ Substituents

FIGURE 2A (cont.)

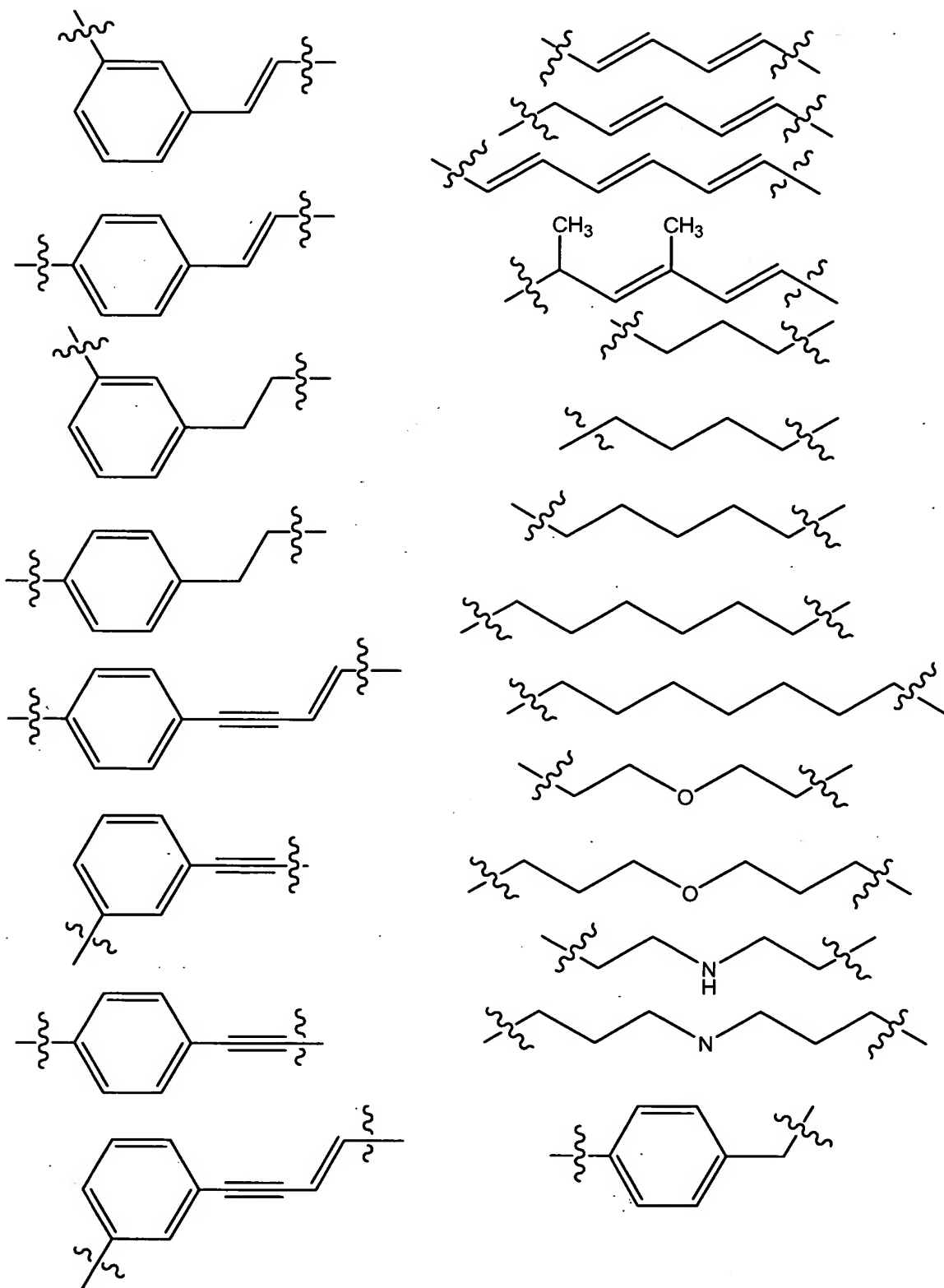**Examples of R₅ Substituents**
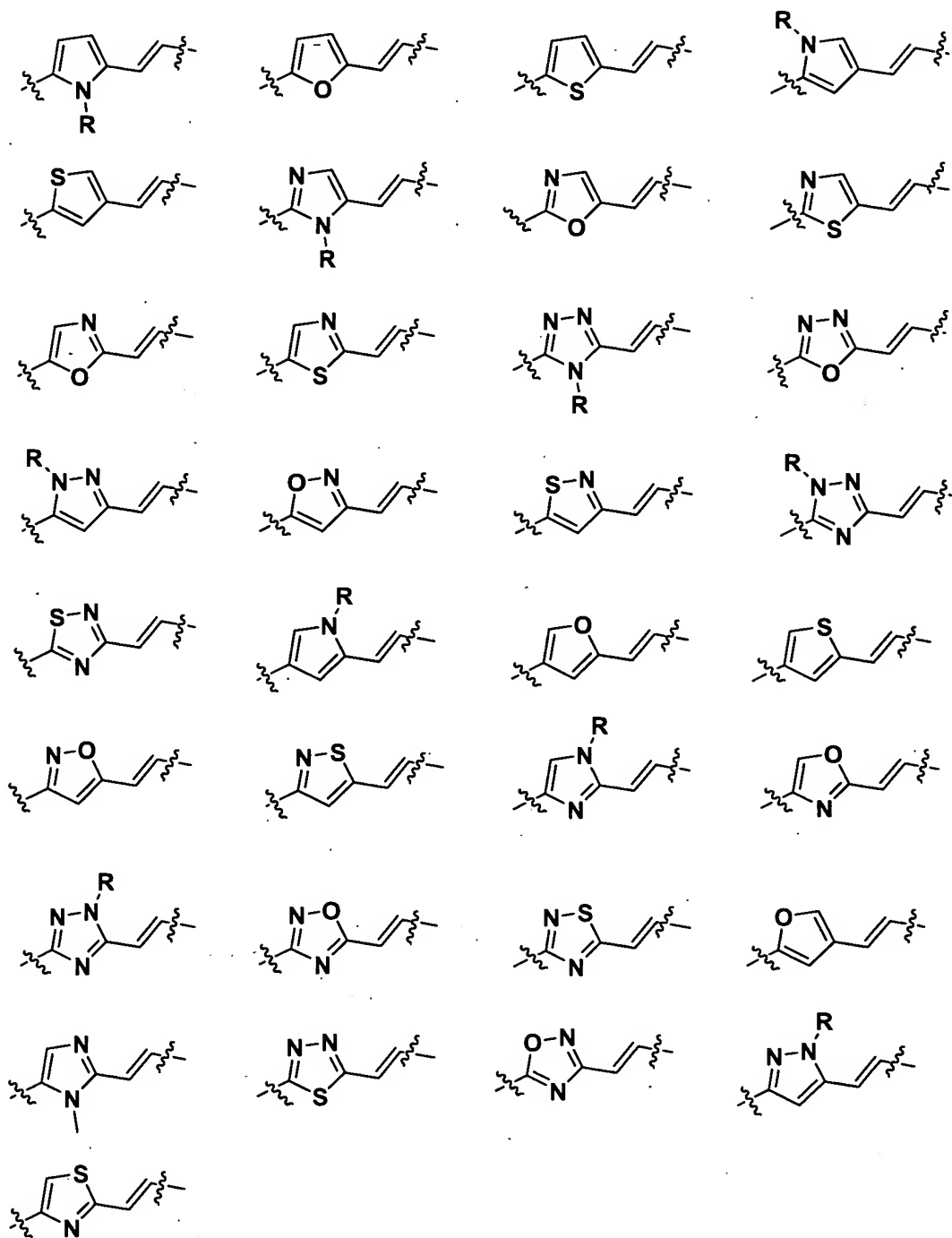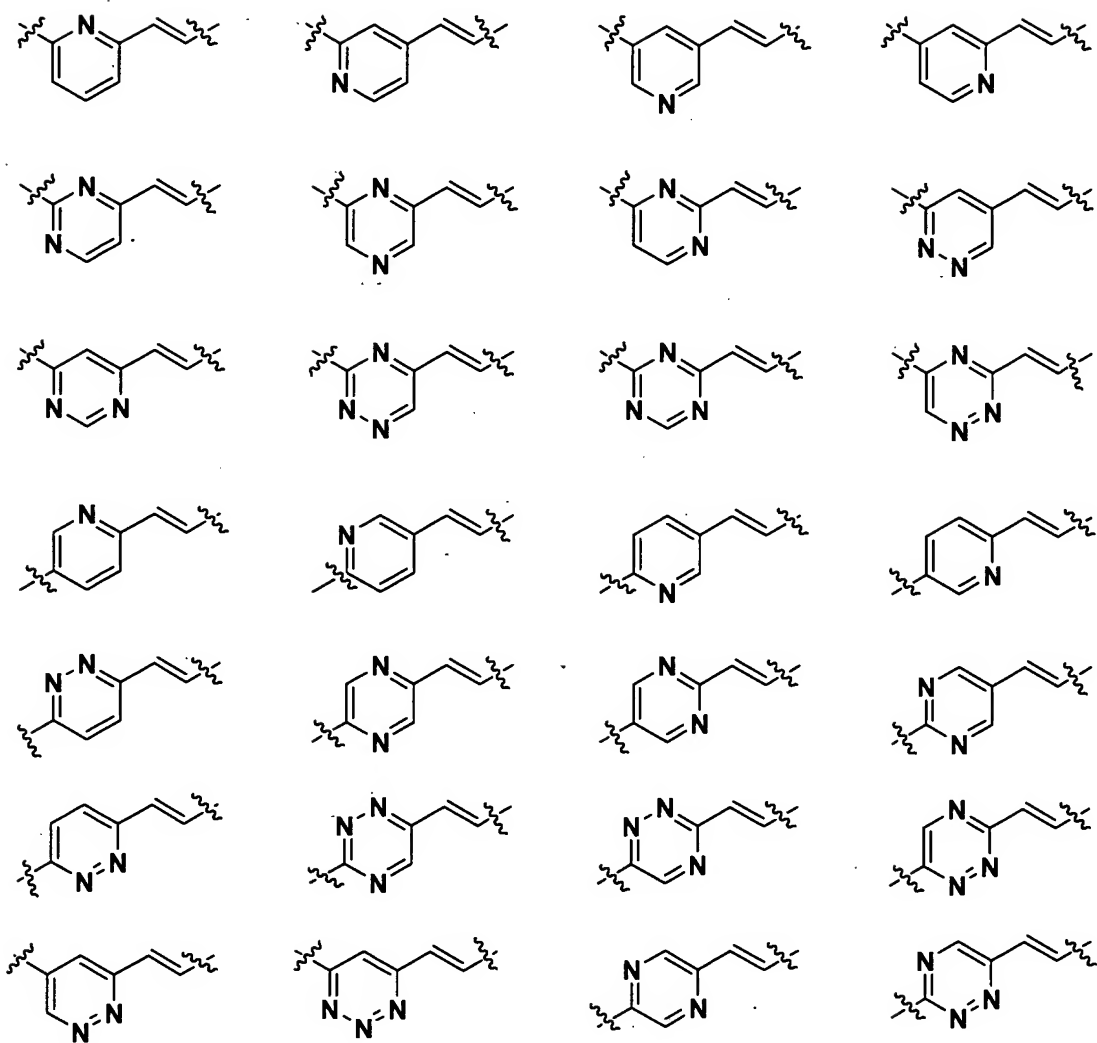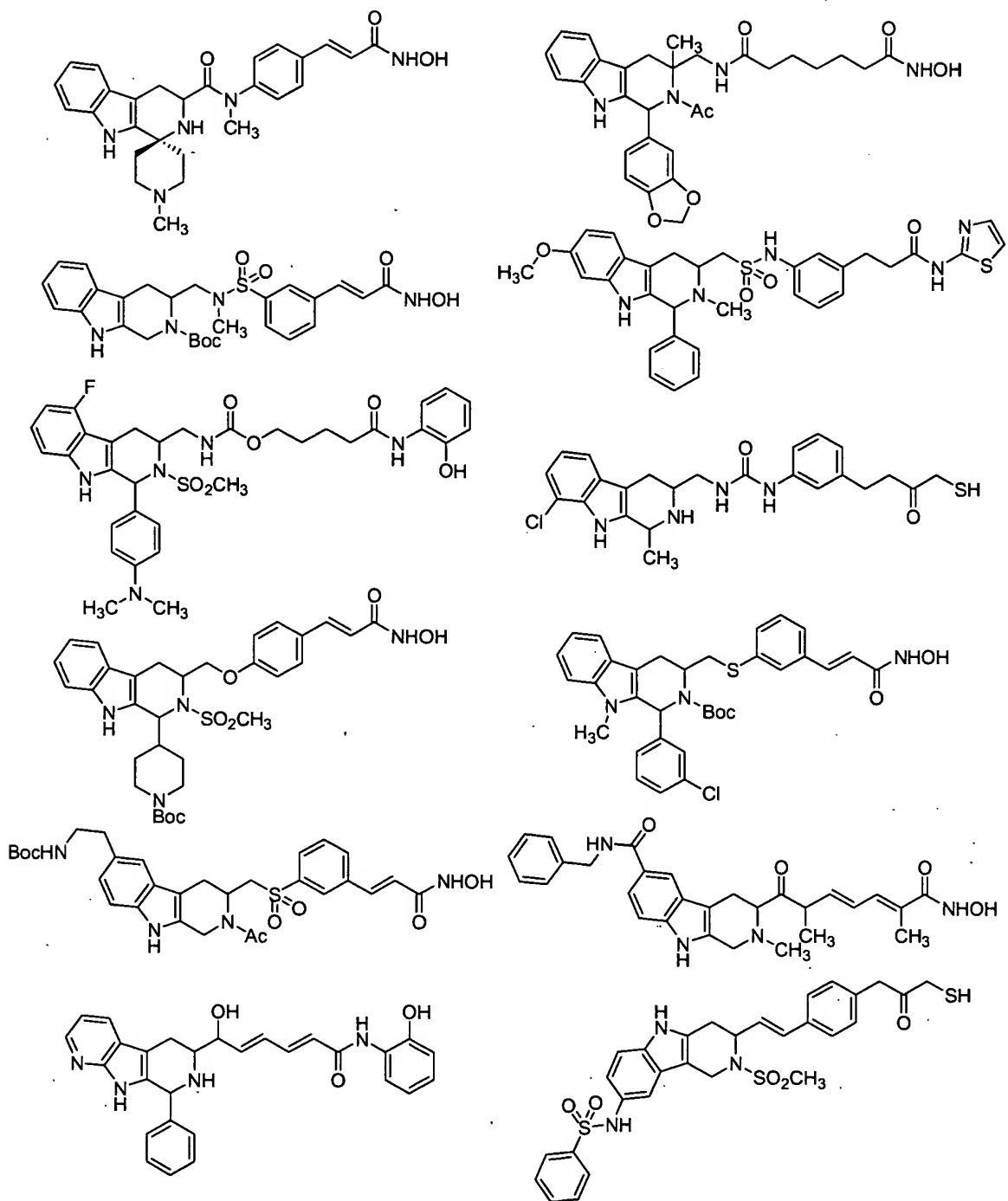
FIGURE 2B
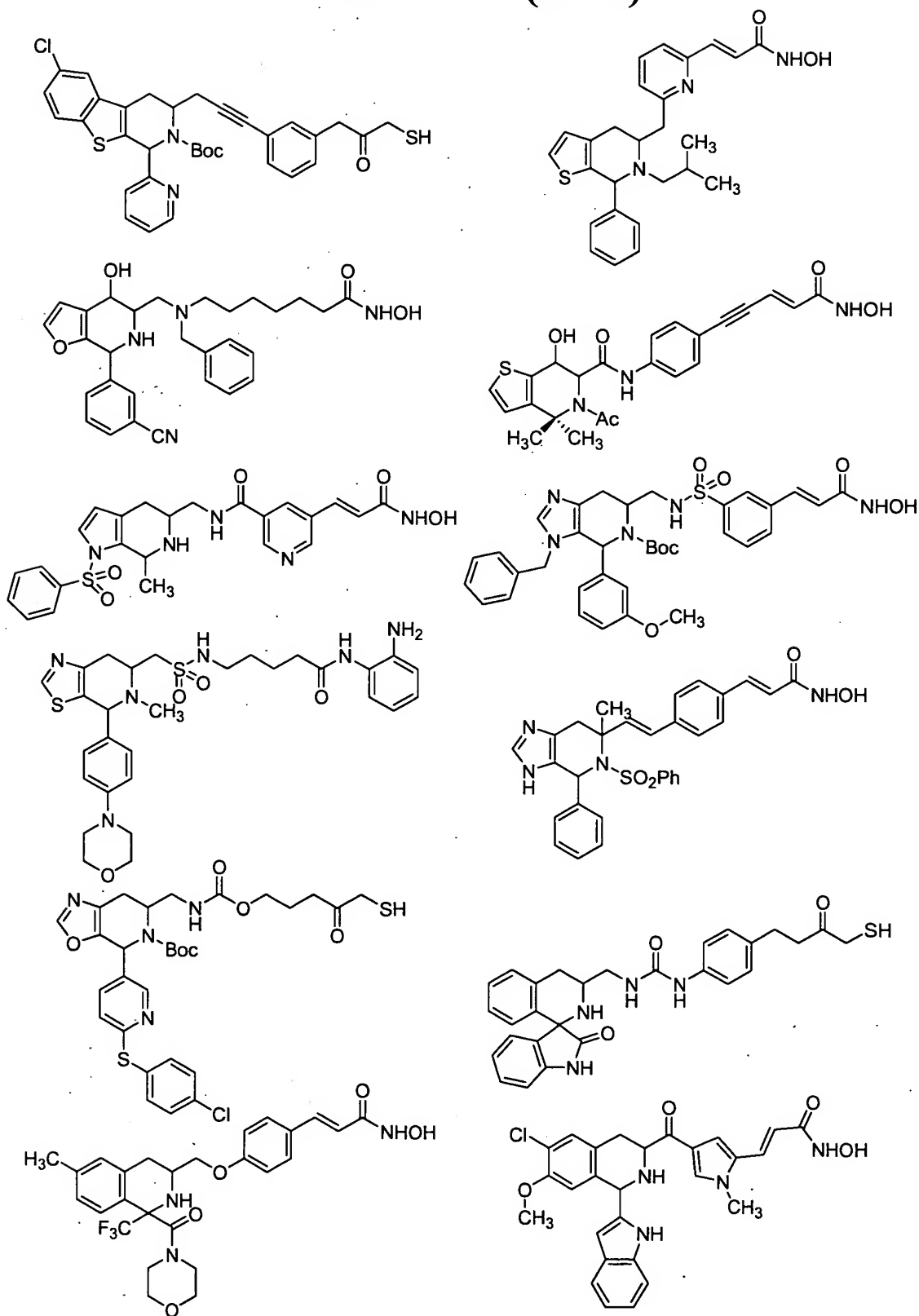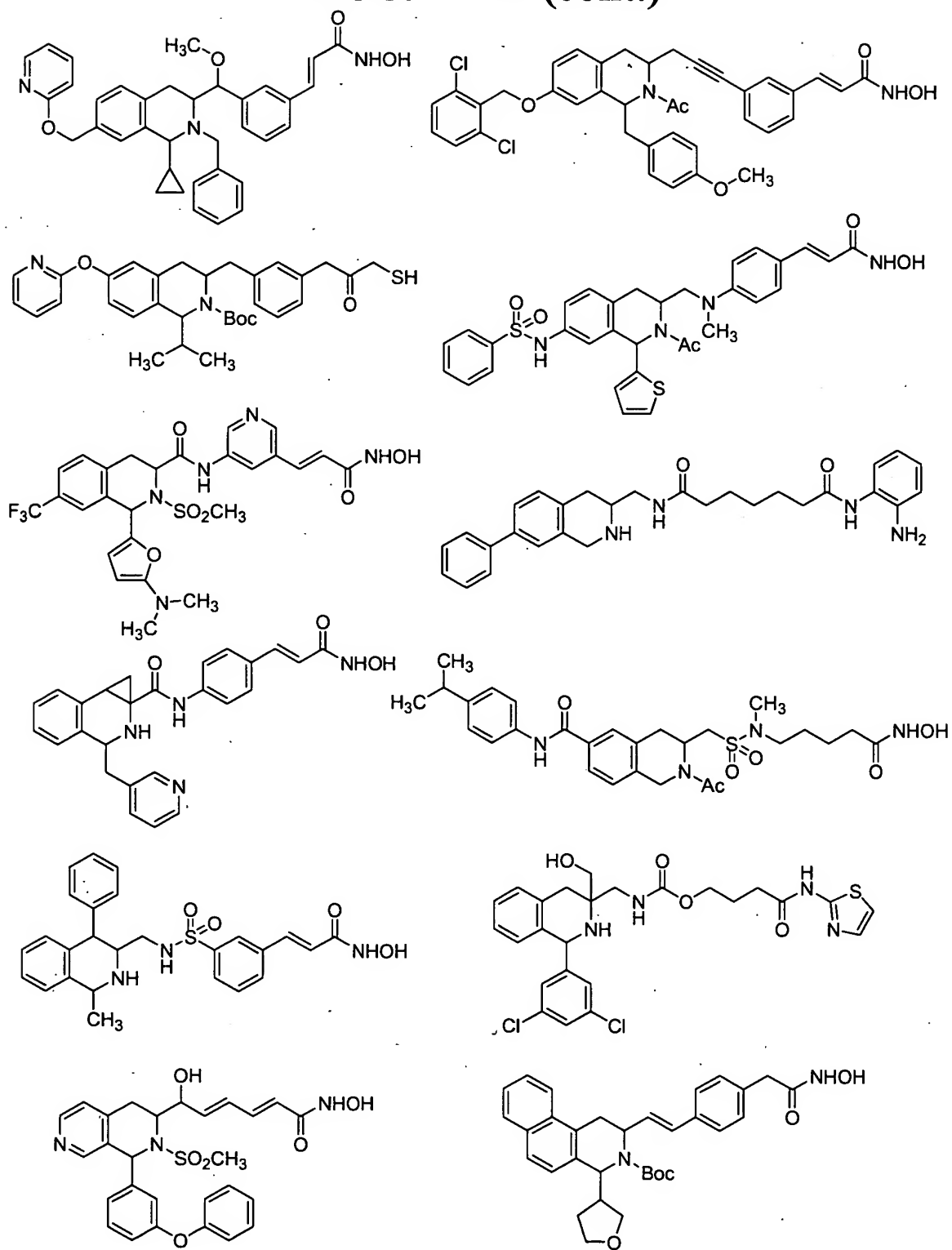
FIGURE 2C

FIGURE 2C (cont.)

FIGURE 2C (cont.)

FIGURE 2D

FIGURE 2D (cont.)

FIGURE 2D (cont.)

FIGURE 3

Amino acid sequence for full length human wild type HDAC8 [SEQ. ID No. 1]

```
MEEPEEPADSGQSLVPVYIYSPEYVSMCDSLAKIPKRASMVHSLIEAYALHKQMRIVKPK  60
VASMEEMATFHTDAYLQHLQKVSQEGDDDHPDSIEYGLGYDCPATEGIFDYAAAIGGATI  120
TAAQCLIDGMCKVAINWSGGWHHAKKDEASGFCYLNDAVLGILRLRRKFERILYVDLDLH  180
HGDGVEDAFSFTSKVMTVSLHKFSPGFFPGTGDVSDVGLGKGWYYSVNVPIQDGIQDEKY  240
YQICESVLKEVYQAFNPKAVVLQLGADTIAGDPMCSFNMTPVGIGKCLKYILQWQLATLI  300
LGGGGYNLANTARCWTYLTGVILGKTLSSEIPDHEFFTAYGPDYVLEITPSCRPDRNEPH  360
RIQQILNYIKGNLKHVV                                            377
```

Human cDNA sequence HDAC8 [SEQ. ID No. 2]

```
ATGGAGGAGCCGGAGGAACCGGCGGACAGTGGGCAGTCGCTGGTCCCGGTTTATATCTAT  60
AGTCCCGAGTATGTCAGTATGTGTGACTCCCTGGCCAAGATCCCCAAACGGGCCAGTATG  120
GTGCATTCTTTGATTGAAGCATATGCACTGCATAAGCAGATGAGGATAGTTAAGCCTAAA  180
GTGGCCTCCATGGAGGAGATGGCCACCTTCCACACTGATGCTTATCTGCAGCATCTCCAG  240
AAGGTCAGCCAAGAGGGCGATGATGATCATCCGGACTCCATAGAATATGGGCTAGGTTAT  300
GACTGCCCAGCCACTGAAGGGATATTTGACTATCAGCAGCTATAGGAGGGGCTACGATC  360
ACAGCTGCCCAATGCCTGATTGACGGAATGTGCAAAGTAGCAATTAACTGGTCTGGAGGG  420
TGGCATCATGCAAAGAAAGATGAAGCATCTGGTTTTTGTTATCTCAATGATGCTGTCCTG  480
GGAATATTACGATTGCGACGGAAATTTGAGCGTATTCTCTACGTGGATTTGGATCTGCAC  540
CATGGAGATGGTGTAGAAGACGCATTCAGTTTCACCTCCAAAGTCATGACCGTGTCCCTG  600
CACAAATTCTCCCCAGGATTTTTCCCAGGAACAGGTGACGTGTCTGATGTTGGCCTAGGG  660
AAGGGATGGTACTACAGTGTAAATGTGCCCATTCAGGATGGCATACAAGATGAAAAATAT  720
TACCAGATCTGTGAAAGCGTACTAAAGGAAGTATACCAAGCCTTTAATCCCAAAGCAGTG  780
GTCTTACAGCTGGGAGCTGACACAATAGCTGGGGATCCCATGTGCTCCTTTAACATGACT  840
CCAGTGGGAATTGGCAAGTGTCTTAAGTACATCCTTCAATGGCAGTTGGCAACACTCATT  900
TTGGGAGGAGGAGGCTATAACCTTGCCAACACGGCTCGATGCTGGACATACTTGACCGGG  960
GTCATCCTAGGGAAAACACTATCCTCTGAGATCCCAGATCATGAGTTTTTCACAGCATAT  1020
GGTCCTGATTATGTGCTGGAAATCACGCCAAGCTGCCGGCCAGACCGCAATGAGCCCCAC  1080
CGAATCCAACAAATCCTCAACTACATCAAAGGGAATCTGAAGCATGTGGTCTAG  1134
```

FIGURE 4

Amino acid sequence for residues 1-377 of HDAC8 with a cleavable N-terminal

6x-histidine tag [SEQ. ID No. 3]

(6x-histidine tag underlined)

```
MHHHHHHPMEEPEEPADSGQSLVPVYIYSPEYVSMCDSLAKIPKRASMVHSLIEAYALHK  60
QMRIVKPKVASMEEMAAFHTDAYLQHLQKVSQEGDDDHPDSIEYGLGYDCPATEGIFDYA  120
AAIGGATITAAQCLIDGMCKVAINWSGGWHHAKKDEASGFCYLNDAVLGILRLRRKFERI  180
LYVDLDLHHGDGVEDAFSFTSKVMTVSLHKFSPGFFPGTGDVSDVGLGKGRYYSVNVPIQ  240
DGIQDEKYYQICESVLKEVYQAFNPKAVVLQLGADTIAGDPMCSFNMTPVGIGKCLKYIL  300
QWQLATLILGGGGYNLANTARCWTYLTGVILGKTLSSEIPDHEFFTAYGPDYVLEITPSC  360
RPDRNEPHRIQQILNYIKGNLKHVV                                    385
```

FIGURE 5